

CASE SUMMARY

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# Alcoa

## ALCOA, INC.

Bettendorf, Iowa (Scott County)

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### The Company

Alcoa, Inc. is an international corporation with 31 business units producing aluminum products, chemicals, electronics, packaging equipment, and construction products at hundreds of locations worldwide. Alcoa Davenport Works is ISO (International Organization for Standardization) 9000 certified and is one of 12 operating locations in the Alcoa Mill Products business unit providing aluminum plate, sheet and foil. Boasting the world's largest hot rolling mill, the plant produced more than 500 million pounds of aluminum plate and sheet in the year 2000.

### Project Background

Previously, the Alcoa, Inc. Davenport Works Environmental Department monitored only broad categories of waste materials at the plant or department scale. Materials including production supplies, maintenance supplies, packaging supplies, cleaners, additives, solvents and lubricants were contributing to dunnage, hazardous, special and universal waste streams, air emissions and water waste streams.

### Incentives to Change

Alcoa, Inc. is a proactive company with ambitious environmental goals. Every three years, each location is subject to a corporate self-assessment that examines compliance with corporate expectations. The internal expectations are more rigid than regulatory compliance, with a commitment to a collective 50% reduction in land filled waste by 2007 (using 2000 as a baseline) and to establishing Environmental Management Systems (EMS) at 350 locations by 2005.

### Results

The Plant is creating an ISO 14001 compatible Environmental Management System that requires the documentation of environmental aspects, or potential situations for a process to cause an environmental impact. In evaluating aspects, one essential step is to identify what makes a location unique. This summer's Pollution Prevention Intern began mass balance diagrams of individual production centers as a starting point in determining how various production centers generate the products and wastes that impact the environment.

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To monitor product usage at the production center level, the first stage involved surveying operating procedures, inspecting supply cabinets, and interviewing production and maintenance workers, as well as specialists in lubricants and masonry.

This investigation provided material descriptions, purchase justification, and final destinations for spent materials.

The second stage involved creating an Access database of production centers and materials data. This database will be used for determining environmental aspects that result from materials usage and for targeting effective waste reduction projects.

As a result of the intern's corporate self-assessment audit, three projects were enacted to help satisfy corporate expectations. These projects were:

### **1. P<sup>2</sup> Suggestion Form**

One of the corporate expectations is that plants use worker interviews to identify causes of waste generation and potential solutions. Both electronic and paper P<sup>2</sup> suggestion forms were made available to all employees. When suggestions are received, the Pollution Prevention Steering Committee will use them to direct future projects.

### **2. P<sup>2</sup> Intranet Homepage**

A *Pollution Prevention and Waste Elimination Intranet Homepage* was created by the intern to serve as a continuously updated source of P<sup>2</sup> success and information.

### **3. Project Selection Mechanism**

The Pollution Prevention (P<sup>2</sup>) Steering Committee expanded project selection criteria to include compliance issues, environmental objectives, ease of solution, quantity and frequency of waste generation, and degree of effectiveness in achieving pollution prevention. The decision mechanism uses a weighted sum method.